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CRIMINAL ANTHROPOLOGY APPLIED TO PEDAGOGY.¹

NOTHING vexes me more than to have to hear or to deliver lectures where the speaker talks from vanity, while the public listens from complacency or politeness, and either learns nothing, or remembers nothing of what is learned. On the present occasion, however, I have accepted my invitation without misgiving. In fact, I should have sought the privilege myself, without your asking ; for I believe that some practical applications of criminal anthropology to pedagogy are so strikingly evident and important that if popularised among teachers they will have the power to bring about a genuine revolution in the prophylaxis of crime. As you know, a science exists which by the help of very simple instruments, such as balances, rods, dynamometers, spirometers, craniometers, etc., measures the length of the human body, the length of the arms, the probable capacity of the cranium (calculated from the circumference, the longitudinal curve, the transversal curve of the head, and the two diameters), the length and breadth of the head, the respiratory capacity, or quantity of air that enters into the lungs (spirometry), and the strength of each of the two hands or of the two together (dynamometry). Now these measures vary remarkably from childhood to maturity, and values have been established for these variations, which you may study in the accompanying table, drawn up for the average of the two sexes.

If a distinction is made between the sexes, it will be discovered that weight, stature, and even cranial capacity are almost equal and

¹ A lecture delivered before the teachers of Turin.

even more developed in females prior to the age of puberty; but from that time on the male exceeds in strength and spirometric capacity. But anthropology also studies a series of anomalies presented by the heads and faces of men.

Capacity. First let us seek an approximate estimate of the quantity of brain contained in the skull. There is a method quite approximate of determining the internal capacity of the cranial case. It is obtained from the sum of the cranial circumference plus the

AGE.	HEIGHT.	WEIGHT.	CIRCUMFERENCE OF THE SKULL.	MUSCULAR FORCE.	VITAL CAPACITY.
1	0'60	9	400		
2	0'70	11	455		
3	0'79	12		11	
4	0'97	14		17	
5	1'03	15		19	
6	1'06	17		22	
7	1'14	19	470	25	845
8	1'15	20	475	34	1050
9	1'20	22		40	1210
10	1'26	24		46	1430
11	1'28	27	445	58	1500
12	1'32	29		64	1800
13	1'37	34	526	82	1400
14	1'40	38		88	2100
15	1'49	43		106	2400
16	1'51	49		112	2030
17	1'52	52		118	3060
18	1'54	57		122	3200
19	1'56	60		129	3250

longitudinal curve, plus the transversal curve, plus the longitudinal diameter, plus the lateral diameter. On an average, the sum of such measurements gives results varying from 1480 to 1540 cubic centimetres. Compared with the true weight of the brain this method gives an error of about a hundred cubic centimetres, not counting the errors due to sclerosis, or hardening, so common in the skulls of insane people. Of this defect we have the following different forms:

1. *Macrocephaly*, the skull too voluminous, generally inclined to be round. Capacity more than 1800–1900 cubic centimetres.
2. *Microcephaly*, the skull unduly small, especially in the forehead. Capacity less than 1000 cubic centimetres.
3. *Scaphocephaly*, the skull shaped like a roof or the keel of a ship along the median anteroposterior direction, with forehead and occiput prominent, parietals quite narrow, form elongated, sometimes with extreme dolichocephaly. When these pathological characteristics are slight, the skull is called scaphoid or subscaphoid.
4. *Plagiocephaly*. A certain asymmetry exists in all skulls, but the exaggerated asymmetry of one side (plagiocephaly) constitutes one of the special characteristics of lunatics, especially epileptics.
5. *Trochocephaly*, the skull ultra-brachycephalic through exaggerated development of the transverse diameter corresponding to the temperofronto-parietal region (pterion).
6. *Platycephaly*, the skull with the top flattened and the vertex depressed.
7. *Climocephaly*, cymbocephaly, the skull has the shape of a saddle, on account of the remarkable depression of the bregmatic region.
8. *Trigonocephaly*, the skull in subtriangular outlines, on account of the pointedness of the frontal region and the breadth of the two parietal fossæ.
9. *Eurycephaly*, the head with the skull narrow, almost always hypsicephalic, and with the face too broad ; this is the exaggeration of the eurygnathism or broadened face of the Mongolian race.
10. *Hyperorthognathism*, the skull with the forehead pushed forward by the advance of the glabellum and the face ; this deformity, generally caused by hydrocephaly, exaggerates the infantile type of the forehead, and the orthognathism or oval face with vertical maxilla of the Caucasian races.

But no knowledge of the sensory life of man is afforded by these data. We have, however, a means of studying the rapidity of a man's perception by means of Hipp's chronoscope ; we can measure to the fraction of a volt the varying degrees of his general or dolorific sensibility by means of another special instrument, or more

roughly by means of the *Schlitteninductorium* of Du Bois-Reymond, counting as the measure of pain or of general sensibility the number of degrees the two bobbins of the machine stand apart. This is the first algometer ; it was introduced by me into science, and has been very useful in psychopathology. The distance apart of the two bobbins expressed in millimetres indicates the degree of intensity of the current and represents approximately also the degree of general or dolorific sensibility. Finally, a very simple instrument that any one can make is Weber's æsthesiometer, composed of two blunted points that are brought together or separated along a graduated rod, and whose distance apart measures the delicacy of the touch.

We have finally the campimeter to measure the area of the field of vision ; and graduated solutions of saccharine and strychnine, and of aromatic essence of cloves, for measuring the senses of taste and smell.

APPLICATIONS.

But you will ask me what the use is of all these measurements. Gentlemen, they serve an important purpose in theoretical pedagogy, which every year is feeling more deeply the need of supporting itself on anthropology, and has already learned from it new and highly practical methods for the education of the youth. But it is not of this that I wish to speak, but of a very important phenomenon connected with the origin of crime.

You know that one of the most important discoveries of my school is that in the child up to a certain age are manifested the saddest tendencies of the criminal man. The germs of delinquency and of criminality are found normally even in the first periods of human life. Pérez has demonstrated the frequency and the precocity of anger in children. In the first two months the child manifests by movements of the eyebrows and of the hands real fits of rage when one tries to bathe it or seeks to take something away from it. At the age of a year it goes so far in its anger as to strike people ; it breaks dishes, and throws them against those who do not act as it wishes, precisely as savages do.

Certain children, says Moreau (*De l'homicide chez les enfants*, 1882), cannot be kept waiting a moment for a thing they want without getting into an extremely violent passion, making weapons of whatever comes to hand, and breaking everything they can lay hold of, when they find their revengeful attempts impotent. These cases demonstrate the frequency and precocity of instinct and of revenge among infants. Even at the age of seven or eight months a child may be seen scratching the nurse when she tries to take away the breast from him, and striking back when hit. A child somewhat hydrocephalic, of slow development and understanding, became irritated at the slightest admonition or punishment, and this continued up to the age of six years. If he could strike the one who irritated him he quieted down; if not, he continued to shriek, and bit his hands with a gesture which we see repeated by caged bears when they cannot revenge themselves for threats made them.

Montaigne has said that lying and obstinacy grow in children just as their body does. All children, writes Boudin, are liars, but especially foundlings, who tell lies for fun. Pérez admits the truth of this statement, and adduces as first cause the freedom we take in deceiving children, even from the first months, in order to quiet them, wash them, and so on. Children lie in order to be allowed what has been forbidden them; often to avoid a reproof by not seeming to deserve it. A three-year-old girl, of wealthy parents and abundantly nourished, whose mother had naturally forbidden her to ask for additional food, requested another lady to give her something to eat, as she had had no food lately, and her mother would give her none. This child is also ambitious of being well dressed, and once told her mother that the lady upstairs had taunted her with not being decently dressed. Yet this was not true. They go so far even as to vilify their own brothers and sisters, and accuse them of imaginary crimes. One little girl, of good parents, smeared herself with carmine and accused her nurse of having wounded her. But the analysis of the red liquid revealed the falsehood.

The moral sense is certainly wanting in children in the first months or even the first years of life. For them, right and wrong

are what is permitted or forbidden by the father or mother, but not once do they perceive independently that a thing is wrong. Once a child of four years who had told lies was punished by his mother by being shut up in the cellar. On the way to the place of punishment he said to her : "But I deserve a good deal worse." But when punished by his grandmother by being simply sent into a dark room, he could not endure it, he considered it an injustice and kept crying out.

"This age is without pity," said La Fontaine, faithful por-trayer of nature. Cruelty, in fact, is one of the common characteristics of children. Says Broussais (*Irritation et folie*, page 20), "There is scarcely a child who does not abuse his power over those who are weaker than he." Such is the first impulse, but the cries of the victim check him unless he is born to ferocity, until a new instinctive impulse leads him to commit a new abuse. In general he prefers wrong to right ; he is cruel rather than good because he thus feels a greater emotion and can feel his own unlimited power, and therefore he is seen to break inanimate objects with delight. He delights in torturing animals, in drowning flies, he beats the dog, he smothers his bird ; sometimes he pours melted wax over beetles to dress them like soldiers, and thus prolong their agony.

Even that fundamental principle of megalomania and of criminality which is excessive vanity, self-absorption, is very great in children. In two families in which the principles of equality are maintained by the parents, the children even at three years of age observe the pretended artificial distinctions of social classes and treat with haughtiness the poor, and with deference the children of their own age whose parents are rich or titled. The same thing, for that matter, is also seen in animals ; for instance, in the watchdog that barks at persons in shabby clothes. All children, from the age of seven or eight months, like to show off their new shoes or hats, and get angry when they are taken off. Many children, even those who afterwards show little intellect and slight precocity, at nine or ten months of age are wont to cry if they are not dressed in some particular pretty gown ; especially does this passion extend to red shoes.

One who lives among the upper classes has no idea of the passion babies have for alcoholic liquor, but among the lower classes it is only too common a thing to see even sucking babes drink wine and liquors with wonderful delight, and to see parents enjoy seeing them get drunk. Nor do we find lacking in early years, even at the age of three or four, obscene tendencies, though limited by incomplete development.

Now when the child becomes a youth, largely through the training of his parents and of the school, still more so by nature itself, when inclined to the good, all this criminality disappears, just as in the fully developed fœtus the traces of the lower animals gradually disappear which are so conspicuous in the first months of the fœtal life ; we have a genuine ethical evolution corresponding to the physical evolution. But in some unfortunates this evolution does not take place, just as in physical monsters there is arrest of physical development or of fœtal evolution, and then the criminal tendencies become more marked than in the majority of youths, often breaking out in terrible atrocities and obscenities, and persisting ever after.

A magistrate sent me the picture of a child that had crushed the heads of two other children from mere jealousy at their being liked better than he, and then for several days pretended to have been himself the victim of an attack, until the bloody instrument was discovered which he had used, whereupon he confessed.

Another group of children banded together to pilfer churches, and one of them boasted of having robbed his accomplices. One child set fire to a village ; another lamented that people no longer ate human flesh. Another child, five years old, intelligent and wide-awake, seeing blood flow from his little brother's nose, knocked him off the chair and, plunging his hands in the blood, cried : "I want to kill this baby, I want to see his blood, I want nothing else." Asked whether he would be willing to kill his mother, he answered : "I can't just now, I shall wait till I am bigger." Another bright child, eleven years old, had struck and threatened a comrade, then he killed him with blows from a sickle, not stopping till tired out, then threw the body into a ditch, where he washed himself and pre-

tended that they had been attacked by a peasant and confessed only when he was promised immunity.

Cruelty was observed in the earliest youth of Caracalla, of Caligula, and of Commodus, who at thirteen had a slave thrown into a furnace for a trivial reason ; of Louis XI. and of Charles IX. who had animals tortured, and of Louis XIII. who crushed slowly between two stones the head of a little bird, and became so irritated against a gentleman whom he did not like, that to calm him down they had to pretend to kill the gentleman. When he became king he delighted to watch the agony of Protestants condemned to death.

Now these criminals are recognised even from their earliest days because they have extraordinary anomalies of the face and of the skull, asymmetry, macrocephaly, exaggeration of the length or breadth, strabismus, ears badly placed or too large, enormous jaws, bad conformation of the teeth, especially of the incisors, now too large, and again too far apart, nose flat and crooked, hair abundant on the forehead, an exaggerated development of the body (a child of seven having the stature and weight of one of nine), strength precocious, left-handedness more common, and above all great dulness of the senses. The sense of touch instead of marking one or two millimetres is so dull as to give four millimetres or more. The sensibility to pain is very slight. The sense of odors and colors is imperfectly developed.

There is then a criminal type, so that your intuition leads you unconsciously to shrink from a person who has the face of a thief, and I have heard the case of a woman who, a few days after the birth of a niece who afterwards became a great criminal, said on seeing her eyes, "She looks as if she were going to murder us all." Recently the notorious Craveri was loath to rent a room to a man who had made a sinister impression on her, and who afterwards killed her. I explain this fact scientifically, by maintaining that in the strata of our brain there must exist elements of the sensations experienced by our progenitors, sensations which are re-awakened as soon as the causes are re-presented which first awakened them.

And as in ancient times the wicked were the dominating op-

pressors and the good were the oppressed, though these latter have been emancipated in the course of time, there remain internal instincts which arouse aversion to those who present that totality of exterior signs which anthropological science has at last explained.

Now, these characteristics in the child are almost the same as in the adult rascal, and when the teacher sees a child that does something naughty and has none of these physical characteristics, reassure the family, because these phenomena will certainly disappear. On the other hand, when the characteristics are conspicuous and continue to be more and more prominent, and the misdeeds are more and more serious, the teacher ought to be on his guard. In these cases the ordinary education will not do. Theoretical ethics passes over these diseased brains, as oil does over marble, without penetrating it. It is necessary to use much more energetic means. Meanwhile see if epilepsy does not exist which can be cured by proper medicines, and try to invigorate or call into being the child's power of psychic inhibition, which in many cases is lacking, and that, not with words, but by good, well-chosen examples. A lad in a reform school at Paris complained to Father Maury of the excessive labor of digging a drain. The priest said nothing, but took the spade and began to work; from that day forth the lad was the model of his comrades.

It is worth while to study the inclinations which predominate in these individuals, in order to be able to direct them and guide them in a special direction. Above all, withdraw them from those fields in which their criminal activity would most develop, especially as they would infect the innocent, as rotten apples do sound ones, and hence particularly keep them away from the great cities and even from large towns, set them at work on isolated farms or as cabin-boys at sea.¹ When at last no measures will longer avail, and when vice has become crime, and habitual crime, procure their

¹ This is the reason that in England, and especially in London and in Geneva, crime has diminished—notably among minors, whilst it is constantly increasing in the other countries of Europe. But the benefactions in the way of preventing juvenile crimes are a hundredfold more numerous in England and Switzerland than in other countries.

isolation as if they were lunatics, so as to spare society a series of misfortunes, the family greater disgrace, and the judges an activity often useless. Human justice examines only fifty per cent. of those who become guilty, and of these does not punish twenty-five per cent., and punishes them ineffectually, often sending them back, especially if young, to their wicked deeds, frequently several times a year. That is why crime triumphs every day, and all that we do serves only to aggravate it. And thus we suffer for the harm the criminal does us, and suffer for the expense of investigations to find him out and to convict him, without all this preventing us from being injured again by him in the near future.

If the teacher, by pointing out the future criminal, prevents his maturing in the bosom of society, he will do a holy work and one truly useful to humanity.

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